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(71) Applicant *(for all designated States except US)*: BOARD OF REGENTS OF UNIVERSITY OF NEBRASKA [US/US]; Varner Hall, 3835 Holdrege Street, Lincoln, NE 68583 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: TUAN, Christopher, Y. [-/US]; 3314 North 152nd Avenue, Omaha, NE 68116 (US). YEHIA, Sherif [EG/US]; 6449 North 107 Court, Omaha, NE 68134 (US). CHEN, Bing [CN/US]; 312 South 70th Avenue, Omaha, NE 68132 (US). NGUYEN, Lim [VN/US]; 9512 South 26th Street, Belleview, NE 68147 (US).

(74) Agents: GROSS, Michael, J. et al.; Shook, Hardy & Bacon L.L.P., One Kansas City Place, 1200 Main Street, Kansas City, MO 64105-2118 (US).

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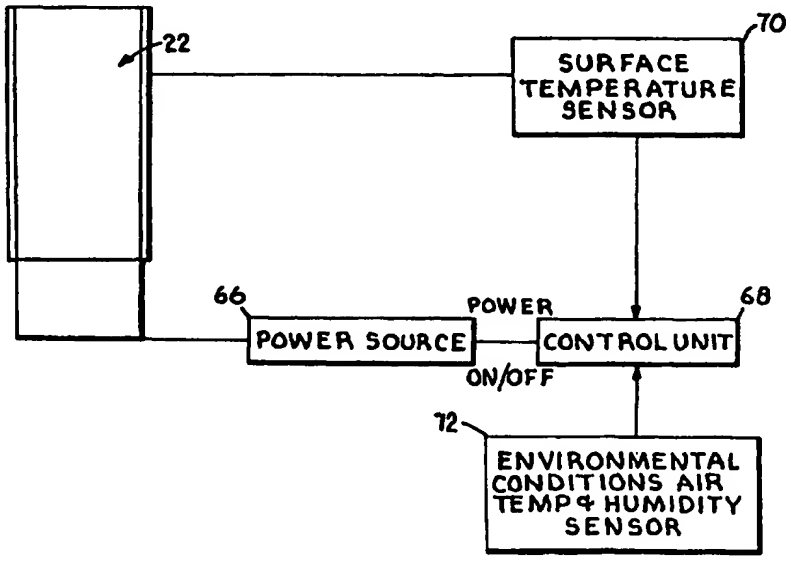

(57) Abstract

A heated bridge deck (20) uses electrodes (24, 26) embedded within conductive concrete and connected to a power source to remove snow and ice accumulation. A cement-based mixture containing optimal amounts of conductive materials is molded into pre-formed slabs (22) placed atop the paved surface of a bridge deck. Alternatively, the conductive concrete may be cast in place on top of an existing bridge deck. A control unit with temperature and moisture sensors may be coupled to the heated bridge deck.